

50. (Amended) An electron beam apparatus comprising a hermetic container which includes an electron source having electron emission devices and targets exposed to electrons emitted from said electron source and further comprising a first member within said hermetic container,

wherein said first member is provided with an uneven geometry at least on a part of its surface, said uneven geometry constituting of the amplitudes of at least two kinds of unevenness, such that total secondary electron emissions generated by irradiating said uneven geometry of said first member with electrons emitted from plural directions is smaller than total secondary electron emissions generated in a case of irradiating a flat surface with electrons under same conditions.

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51. (Amended) An electron beam apparatus comprising a hermetic container which includes an electron source having electron emission devices and targets exposed to electrons emitted from said electron source and further comprising a first member within said hermetic container,

wherein said first member is provided with an uneven geometry at least on a part of its surface, said uneven geometry constituting of the cycles periods of at least two kinds of unevenness, such that total secondary electron emissions generated by irradiating said uneven geometry of said first member with electrons emitted from plural directions is smaller than total secondary electron emissions generated in a case of irradiating a flat surface with electrons under same conditions.

93. (Amended) An electron beam apparatus, comprising:

a hermetic container which includes an electron source having electron emission devices and targets exposed to electrons emitted from said electron source; and

a first member within said hermetic container,

wherein said first member is provided with an uneven geometry on at

least a part of its surface, and said uneven geometry has multiple cycles, such that total secondary electron emissions generated by irradiating said uneven geometry of said first member with electrons emitted from plural directions is smaller than total secondary electron emissions generated in a case of irradiating a flat surface with electrons under same conditions.

94. (New) An electron beam apparatus, comprising:

a hermetic container which includes an electron source having electron emission devices and targets exposed to electrons emitted from said electron source; and

a first member within said hermetic container,

wherein said first member is provided with a random uneven geometry on at least a part of its surface, said uneven geometry being arranged at least in two directions on the surface, such that total secondary electron emissions generated by irradiating said uneven geometry of said first member with electrons emitted from plural

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irradiating a flat surface with electrons under same conditions.

95. (New) An electron beam apparatus comprising a hermetic container
which includes an electron source having electron emission devices and targets exposed to
electrons emitted from said electron source and further comprising a first member within
said hermetic container,

E4 wherein said first member is provided with an uneven geometry at
least on a part of its surface, said uneven geometry being arranged at least in two directions
on the surface, such that total secondary electron emissions generated by irradiating the
uneven geometry of said first member with electrons incident therein in a larger incident
angle is smaller than total secondary electron emissions generated in a case of irradiating a
flat surface with electrons under same conditions

96. (New) An electron beam apparatus comprising a hermetic container
which includes an electron source having electron emission devices and targets exposed to
electrons emitted from said electron source and further comprising a first member within
said hermetic container,

wherein said first member is provided with an uneven geometry at
least on a part of its surface, said uneven geometry constituting of amplitudes of at least
two kinds of unevenness, such that a total secondary electron emissions generated by

irradiating the uneven geometry of said first member with electrons incident therein in a larger incident angle is smaller than total secondary electron emissions generated in a case of irradiating a flat surface with electrons under same conditions.

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97. (New) An electron beam apparatus comprising a hermetic container which includes an electron source having electron emission devices and targets exposed to the electrons emitted from said electron source and further comprising a first member within said hermetic container,

wherein said first member is provide with an uneven geometry at least on a part of its surface, said uneven geometry constituting of the cycles periods of at least two kinds of unevenness, such that total secondary electron emissions generated by irradiating the uneven geometry of said first member with electrons incident therein in a larger incident angle is smaller than total secondary electron emissions generated in case of irradiating a flat surface with electrons under same conditions.

98. (New) An electron beam apparatus, comprising:

a hermetic container which includes an electron source having electron emission devices and targets exposed to electrons emitted from said electron source; and

a first member within said hermetic container,

wherein said first member is provided with an uneven geometry on at least a part of its surface, and said uneven geometry has multiple cycles, such that total secondary electron emissions generated by irradiating the uneven geometry of said first member with electrons incident therein in a larger incident angle is smaller than total secondary electron emissions generated in a case of irradiating a flat surface with electrons under same conditions.

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99. (New) An electron beam apparatus, comprising:

a hermetic container which includes an electron source having electron emission devices and targets exposed to electrons emitted from said electron source; and

a first member within said hermetic container,

wherein said first member is provided with a random uneven geometry on at least a part of its surface, such that total secondary electron emissions generated by irradiating the uneven geometry of said first member with electrons incident therein in a larger incident angle is smaller than total secondary electron emissions generated in case of irradiating a flat surface with electrons under same conditions.

100. (New) An electron beam apparatus comprising a hermetic container which includes an electron source having electron emission devices and targets exposed to

the electrons emitted from said electron source and further comprising a first member within said hermetic container,

wherein said first member is provided with an uneven geometry at least on a part of its surface, such that total secondary electron emissions generated by irradiating said uneven geometry of said first member with electrons reflected from said targets is smaller than total secondary electron emissions generated in a case of irradiating a flat surface with electrons under same conditions.

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101. (New) An electron beam apparatus comprising a hermetic container which includes an electron source having electron emission devices and targets exposed to the electrons emitted from said electron source and further comprising a first member within said hermetic container,

wherein said first member is provided with an uneven geometry at least on a part of its surface, said uneven geometry constituting of amplitudes of at least two kinds of unevenness.

102. (New) An electron beam apparatus comprising a hermetic container which includes an electron source having electron emission devices and targets exposed to the electrons emitted from said electron source and further comprising a first member within said hermetic container,

wherein said first member is provided with an uneven geometry at least on a part of its surface, said uneven geometry constituting of the cycles periods of at least two kinds of unevenness, such that total secondary electron emissions generated by irradiating said uneven geometry of said first member with electrons reflected from said targets is smaller than total secondary electron emissions generated in a case of irradiating a flat surface with electrons under same conditions.

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103. (New) An electron beam apparatus, comprising:

a hermetic container which includes an electron source having electron emission devices and targets exposed to electrons emitted from said electron source; and

a first member within said hermetic container,

wherein said first member is provided with an uneven geometry on at least a part of its surface, and said uneven geometry has multiple cycles, such that total secondary electron emissions generated by irradiating said uneven geometry of said first member with electrons reflected from said targets is smaller than total secondary electron emissions generated in a case of irradiating a flat surface with electrons under same conditions.

104. (New) An electron beam apparatus, comprising:

a hermetic container which includes an electron source having electron emission devices and targets exposed to electrons emitted from said electron source; and

a first member within said hermetic container,

wherein said first member is provided with a random uneven geometry on at least a part of its surface, such that total secondary electron emissions generated by irradiating said uneven geometry of said first member with electrons reflected from said targets is smaller than total secondary electron emissions generated in a case of irradiating a flat surface with electrons under same conditions.

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105. (New) An electron beam apparatus comprising a hermetic container which includes an electron source having electron emission devices and targets exposed to electrons emitted from said electron source and further comprising a first member within said hermetic container,

wherein said first member is provided with an uneven geometry at least on a part of its surface, such that charging said first member by irradiating said uneven geometry of said first member with electrons reflected from said targets is smaller than charging said first member irradiating a flat surface with the electrons under the same conditions.

106. (New) An electron beam apparatus comprising a hermetic container which includes an electron source having electron emission devices and targets exposed to electrons emitted from said electron source and further comprising a first member within said hermetic container,

wherein said first member is provided with an uneven geometry at least on a part of its surface, said uneven geometry constituting of amplitudes of at least two kinds of unevenness.

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cont.

107. (New) An electron beam apparatus comprising a hermetic container which includes an electron source having electron emission devices and targets exposed to electrons emitted from said electron source and further comprising a first member within said hermetic container,

wherein said first member is provided with an uneven geometry at least on a part of its surface, said uneven geometry constituting of the cycles periods of at least two kinds of unevenness, such that charging said first member by irradiating said uneven geometry of said first member with electrons reflected from said targets is smaller than charging said first member irradiating a flat surface with the electrons under same conditions.

108. (New) An electron beam apparatus, comprising:

a hermetic container which includes an electron source having electron emission devices and targets exposed to electrons emitted from said electron source; and

a first member within said hermetic container,

wherein said first member is provided with an uneven geometry on at least a part of its surface, and said uneven geometry has multiple cycles, such that charging said first member by irradiating said uneven geometry of said first member with electrons reflected from said targets is smaller than charging said first member irradiating a flat surface with the electrons under same conditions.

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109. (New) An electron beam apparatus, comprising:

a hermetic container which includes an electron source having electron emission devices and targets exposed to electrons emitted from said electron source; and

a first member within said hermetic container,

wherein said first member is provided with a random uneven geometry on at least a part of its surface, such that charging said first member by irradiating said uneven geometry of said first member with electrons reflected from said targets is smaller than charging said first member irradiating a flat surface with the electrons under same conditions.

110. (New) An electron beam apparatus according to any one of claims 95, 100, and 105,

wherein the direction along which said uneven geometry is arranged is random.

111. (New) An electron beam apparatus according to any one of claims 96, 101, and 106,

wherein the amplitudes of said uneven geometry is random.

112. (New) An electron beam apparatus according to any one of claims 97, 102, and 107,

wherein the cycle periods of said uneven geometry is random.

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REMARKS

This application has been reviewed in light of the Office Action dated November 18, 2002. Claims 1-84 and 86-112 are now presented for examination. New Claims 95-112 have been added to provide Applicants with a more complete scope of protection. Claims 49-51, 93, and 94 have been amended to even further clarify the claimed subject matter. Claims 1, 26, 27, 43-51, 91, and 93-109 are independent. Favorable reconsideration is requested.